

Recovery Plan Action Status

Plan Name: Vernal Pools of Southern California Recovery Plan

Plan Status: Final

Plan Date: 03-Sep-98

Lead Agency: USFWS

Lead Office: Carlsbad Fish And Wildlife Office

(431-9440)

| Species | Action Priority # | Action # | Action Description | Action Status | Est. Initiation Date | Est. Completion Date | Responsible Parties | Work Type | Labor Type | Action Comments |
|--|-------------------|----------|--|--------------------|----------------------|----------------------|--|------------------------------|------------|-----------------|
| San Diego button-celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>), San Diego mesa-mint (<i>Pogogyne abramsii</i>), Spreading navarretia (<i>Navarretia fossalis</i>), California Orcutt grass (<i>Orcuttia californica</i>), Otay mesa-mint (<i>Pogogyne nudiuscula</i>), Riverside fairy shrimp (<i>Streptocephalus woottoni</i>), San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>) | 1 | 111 | Inventory each of the complexes to determine the extent and configuration of the individual vernal pools and their associated watersheds | Partially Complete | Prior to FY 1995 | | U.S. Department of Defense, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, U.S. Army Corps of Engineers | Research: Habitat Status | Contract | |
| San Diego button-celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>), San Diego mesa-mint (<i>Pogogyne abramsii</i>), Spreading navarretia (<i>Navarretia fossalis</i>), California Orcutt grass (<i>Orcuttia californica</i>), Otay mesa-mint (<i>Pogogyne nudiuscula</i>), Riverside fairy shrimp (<i>Streptocephalus woottoni</i>), San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>) | 1 | 112 | Inventory each pool within each complex to determine the species and abundance | Partially Complete | Prior to FY 1995 | | City governments, County governments, U.S. Department of Defense, U.S. Federal Highway Administration, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, U.S. Army Corps of Engineers | Research: Population Surveys | Contract | |

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| San Diego button-celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>), Spreading navarretia (<i>Navarretia fossalis</i>), California Orcutt grass (<i>Orcuttia californica</i>), Riverside fairy shrimp (<i>Streptocephalus woottoni</i>), San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>) | 1 | 122 | Secure the existing vernal pools and their associated watersheds currently occupied by <i>Orcuttia californica</i> , <i>Pogogyne nudiuscula</i> and the Riverside Fairy Shrimp | Ongoing Current | FY 2011 | FY 2012 | City governments, County governments, U.S. Department of Defense, U.S. Federal Highway Administration, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, U.S. Army Corps of Engineers | Acquisition: General | Internal Technical Assistance | Parcels were acquired using Section 6 funding on Otay Mesa (Clayton and several 1 ac parcels) and Whihelm in western Riverside County. In addition, the Lonestar property (J29-30) was acquired for mitigation by CalTrans and several private projects. |
| San Diego button-celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>), San Diego mesa-mint (<i>Pogogyne abramsii</i>), California Orcutt grass (<i>Orcuttia californica</i>) | 1 | 123 | Secure the existing vernal pools and their associated watersheds within the Transverse and LA Basin/Orange Mangement Areas | Ongoing Not Current | FY 1995 - FY 1999 | | City governments, County governments, U.S. Department of Defense, U.S. Federal Highway Administration, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, U.S. Army Corps of Engineers | Acquisition: General | Internal Technical Assistance | |

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| San Diego button-celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>), San Diego mesa-mint (<i>Pogogyne abramsii</i>), Spreading navarretia (<i>Navarretia fossalis</i>), California Orcutt grass (<i>Orcuttia californica</i>), Otay mesa-mint (<i>Pogogyne nudiuscula</i>), Riverside fairy shrimp (<i>Streptocephalus woottoni</i>), San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>) | 2 | 2 | Within each Management Area, reestablish vernal pool habitat to historic structure and composition to increase genetic diversity and population stability. | Ongoing Current | FY 1995 - FY 1999 | | City governments, County governments, U.S. Department of Defense, U.S. Federal Highway Administration, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, U.S. Army Corps of Engineers | Management: Habitat Maintenance and Manipulation, Management: Reintroduction | Contract, Internal Technical Assistance, Species Expert | Restoration is being implemented by Caltrans on both Otay Mesa and Del Mar Mesa; SD NWR has restored habitat in the S series pools by Sweetwater. |

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